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(54) Frequency diversity transponder arrangement

(57) A method of communicating between a transponder and an interrogator. The interrogator (10) transmits a wireless RF interrogation which is received by the transponder (12). The transponder (12) then transmits a wireless RF response. The wireless RF response has a first channel response centered at frequency FDX1=RF+SC, a second channel response centered at frequency FDX2=RF-SC, and a third channel response centered at frequency FDX3=SC. The third channel response is a spurious signal resulting from using a non-linear element (32) as the transponder mod-

ulator (32,34). The interrogator (10) receives this wireless RF response. The response is received in the three channels with a first circuit (82) operable to receive said first channel response, a second circuit (86) is operable to receive said second channel response, and a third circuit (86,88) is operable to receive said third channel response. A controller (102) then selects the response from one of said first, second, or third circuits (82,86,88) for demodulating. A demodulator (100) may then demodulate one the selected channel responses. Other arrangements, systems, and methods are disclosed.

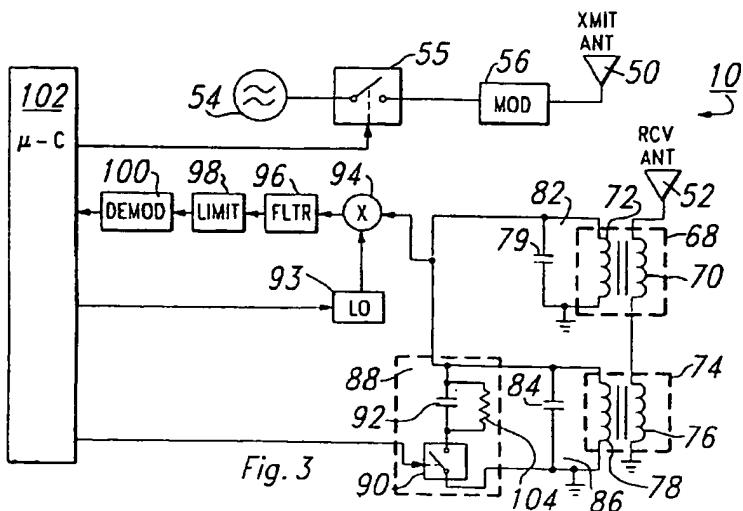


Fig. 3



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EUROPEAN SEARCH REPORT

Application Number
EP 94 11 0287

DOCUMENTS CONSIDERED TO BE RELEVANT			CLASSIFICATION OF THE APPLICATION (Int.Cl.)
Category	Citation of document with indication, where appropriate, of relevant passages	Relevant to claim	
A	US-A-4 725 841 (NYSEN PAUL A ET AL) 16 February 1988 * the whole document *	1,16,17	G01S13/75 G01S13/02
A	WO-A-82 01437 (DETERRENT TECH CORP) 29 April 1982 *abstract ; fig 1 *	1,16,17	
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			TECHNICAL FIELDS SEARCHED (Int.Cl.)
			G01S
<p>The present search report has been drawn up for all claims</p>			
Place of search	Date of completion of the search	Examiner	
THE HAGUE	8 May 1996	Deconinck, E	
CATEGORY OF CITED DOCUMENTS		T : theory or principle underlying the invention E : earlier patent document, but published on, or after the filing date D : document cited in the application L : document cited for other reasons & : member of the same patent family, corresponding document	
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